

REMARKS

In the Office Action dated August 28, 2002, the response time to which has been extended by a concurrently filed Request for Two-Month Extension of Time and Fee, the drawings are objected to. Claims 1-13 and 15 are rejected under 35 U.S.C. § 112. Claims 1-6 and 1-29 are rejected under 35 U.S.C. § 102(b). For the reasons set forth herein, it is respectfully submitted that all objections and rejections have been overcome. Our reconsideration is, therefore, respectfully requested.

A proposed drawing correction is submitted herewith and shows in red proposed corrections, to Figures 1-5, labeling 1-5 prior art as required by the Examiner.

The Examiner also objects to the drawings as the conductive members shown in cross section are not properly cross-hatched. The Examiner suggests that the connector housing 12 be shown with a cross-hatch for conductive members. However, the cross-hatching suggested by the Examiner is also used for metal members. In Applicants' invention, the housing 12, while capable of being formed of metal, is in the example described in the application formed of plastic which is doped or otherwise provided with conductive features. It is respectfully submitted that changing the cross-hatching of the housing 12 from plastic to metal, while suggesting conductive features, would be inaccurate in terms of depicting the housing as being of metal. Thus, it is submitted that the better cross-hatching is the plastic cross-hatching already shown in Figures 7, 9, and 10.

Claims 1-13 and 15 are rejected under 35 U.S.C. § 112, second paragraph. The Examiner contends that the claim would require a recitation of the conductivity of the connector housing. Claim 1 and 15 have been amended to include this feature.

The rejections of claims 2 and 3 are rendered moot by the incorporation of the features of claims 2 and 3 into claim 1, thereby providing proper antecedent basis for all elements.

In claim 12, "finger" has been revised to "locating member" to more specifically describe the function of this feature of Applicants' invention. As stated on page 12, paragraph 58 of the specification, locating fingers 130 project angularly from the ring 122 and are adapted to engage the inner surface of the bore 22 and the housing 20 to center and fixedly locate the contact member 120 to the housing 20.

Claim 15 is considered by the Examiner to be indefinite as it appears to include limitations directed toward the male endform. Claim 15 has been amended to indicate that the claimed fluid quick connector is adapted for use with the male endform.

For the above reasons, it is respectfully submitted that Applicants' invention as set forth in all of the pending claims is particularly pointed out in distinctly claimed as required by 35 U.S.C. § 112, second paragraph.

Claims 1-6 and 10-15 are rejected under 35 U.S.C. § 102 (b) as being anticipated by Hand. The Examiner contends that Hand discloses a fluid quick connector having all of the features of Applicants' invention as set forth in claim 1, and the claims depending therefrom. It is respectfully submitted that Hand is devoid of any teaching or suggestion of certain features of Applicants' invention and cannot be said to anticipate Applicants' invention as set forth in claim 1, and claims 4-6 and 10-14 which depend from claim 1 or from claim 15.

First, Hand discloses a gland for terminating cables and pipes wherein the cable and pipe is defined as a fiber optic cable containing fiber optic elements and inner and outer insulating sheaths. A conductive ring with a plurality of arms extends from an annular ring. Hooks are formed on the end of each arm for piercing through the insulated sheaths of the pipe to engage an inner conductive layer. Thus, it is clear that a conductive arm and hook arrangement of Hand is devised for piercing the outer insulated sheaths of a fiber optic cable or pipe to engage an inner conductive layer in the cable or pipe.

This is opposed to Applicants' definition in claim 1 of the contact member having at least one arm which is extendable through the open end of a bore in a male endform for contact with a surface of the male endform. The piercing hooks and arm of Hand do not extend inward into the bore in the pipe or cable, but engage the conductive layer by piercing through the exterior sheaths of the cable. In addition, the cable or pipe of Hand, being a fiber optic cable, would normally not be hollow so as to permit any insertion of a contact member or an arm of contact member into the bore in the endform into contact with a surface of the endform.

For these reasons, it is respectfully submitted that Applicants' invention as set forth in claim 1 as well as claims 4-6 and 10-13 which depends therefrom includes features which are not even anticipated or even rendered obvious by Hand.

Claims 1-3 and 7-9 are also rejected on 35 U.S.C. § 102 (b) as being anticipated by Johnson.

However, it is respectfully submitted that Johnson fails to anticipate all of the features of Applicants' invention as set forth in claim 1, as well as claims 7-9 which depend therefrom.

Johnson discloses a socket receptacle having multiple flexed legs for contacting an inserted pin which includes a means for preventing the legs from being overstressed by misalignment of the pin. Johnson discloses a tubular member or socket which is inserted into a bore in a circuit board in engagement with a conductive layer of a surface board. The tubular member includes an annular collar with an end flange which seats against one surface of the circuit board with the annular collar extending into the board in the circuit board. A plurality of flexible fingers extend from the collar and are engaged by the pin inserted into the board.

Johnson differs from Applicants' invention as set forth in claim 1 since Johnson is directed to a circuit board contact, not a fluid quick connector as set forth by the Applicants in claim 1. Second, the arm of Applicants' contact member is extendable through an open end of a bore in a male endform into contact with the surface of the male endform. The arms in Johnson, like the piercing arm and hooks of Hand, engage the exterior of a conductive member inserted through the ring or contact member. This is directly opposed to Applicants' invention and cannot be said to anticipate Applicants' invention as set forth in claim 1, as well as claims 7-9 which depend therefrom.

In addition to the patentability of Applicants' invention set forth in claim 8 over Johnson through dependency, it is respectfully submitted that Johnson is devoid of any teaching of splitting the tubular body to form spaced edges allowing compression of the body or press fit mounting the tubular body in the bore of a quick connector housing. Thus, for this reason, it is respectfully submitted that Applicants' invention as set forth in claim 8 patentably defines over Johnson in its own right, in addition to its patentability through dependency from claim 1.

Applicants' invention as set forth in claim 15 is defined in a similar combination. For the same reasons set forth for claim 1, it is respectfully submitted that Hand does not teach or anticipate all other features of Applicants' invention as set forth in claim 15. Thus, claim 15 is submitted to patentably define over Hand and is not anticipated or even rendered obvious by Hand.

Finally, claims 16-29 are rejected under 35 U.S.C. § 102 (b) as being anticipated by Johnson.

The same reasons discussed above with respect to the patentability of Applicants' invention in claim 1 over Johnson are applied to Applicants' invention set forth in claim 16, and claims 19-28 which depend therefrom.

The contact member in Johnson engages an exterior surface of an inserted pin or tubular member and does not extend through an open end of the inserted member into contact with the surface of the inserted member. For these reasons, it is respectfully submitted that Applicants' invention as set forth in claim 16, as well as claims 19-28 which depend therefrom, patentably defines over Johnson and is not anticipated thereby.

For the above reasons, it is respectfully submitted that Applicants' invention as set forth in claims 1, 4-16, and 19-28 include features which are not anticipated or even rendered obvious by the cited references, taken singly as posed by the Examiner. Thus, it is submitted that such claims are in condition for allowance somewhat, a notice of which is respectfully requested.

Respectfully submitted,

YOUNG, BASILE, HANLON, MacFARLANE, WOOD
& HELMHOLDT, P.C.



William M. Hanlon, Jr.
Attorney for Applicant(s)
Registration No. 28422
(248) 649-3333

3001 West Big Beaver Rd., Suite 624
Troy, Michigan 48084-3107

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

1 1. (Amended) A fluid quick connector comprising:
2 an electrically conductive [a] connector housing configured to mate
3 with [a] male endform having a bore extending from end; and
4 an electrically conductive contact member mounted in the housing and
5 adapted for contacting the male endform to electrically connect the male endform and
6 the quick connector housing[.], the contact member including:
7 a first portion adapted to be mountable in a quick connector
8 housing bore in contact with the quick connector housing; and
9 at least one arm extending from the first portion for contact
10 with the male endform, the arm extendable through an open end of a bore in
11 the male endform in contact with a surface of the male endform.

Cancel claims 2 and 3.

1 4. (Amended) The fluid quick connector of claim [3] 1 further
2 comprising:
3 the arm having a bent end extendable into the male endform.

1 7. (Amended) The fluid quick connector of claim [3] 1 wherein
2 the first portion comprises:
3 a tubular body mountable in the bore in the quick connector housing,
4 the arm extending from one end of the tubular body.

1 10. (Amended) The fluid quick connector of claim [2] 1 wherein
2 the first portion of the contact member comprises:
3 an annular ring mountable in the bore in the quick connector housing,
4 the arm extending from the annular ring.

1 12. (Amended) The fluid quick connector of claim 10 further
2 comprising:

3 at least one [finger] locating member extending angularly from the
4 annular ring of the contact member, the at least one [finger] locating member
5 engagable with an end of the male endform to center the annular ring relative to the
6 male endform.

Cancel claim 14.

1 15. (Amended) A fluid quick connector comprising:
2 a connector housing [configured] adapted to mate with [a] an
3 electrically conductive male endform along a first axis;

4 the quick connector housing [and the male endform being] formed of
5 an electrically conductive material; and

6 a contact member having a first portion fixedly mountable in a bore in
7 the housing, and an arm extending from the first portion adapted to extend through an
8 open end of a bore in the male endform to dispose the arm in contact with a surface
9 of the male endform.

1 16. (Amended) An electrical contact for [a] an electrically
2 conductive fluid quick connector having a connector housing configured to mate with
3 [a] an electrically conductive male endform, the electrical contact comprising:

4 an electrically conductive contact member adapted to mount in a quick
5 connector housing to electrically connect a male endform inserted into the housing to
6 the quick connector housing[.], the contact member including:

7 a first portion adapted to be mountable in the quick connector
8 housing bore in contact with the quick connector housing; and

9 an arm extending from the first portion adapted for contact
10 with the male endform inserted into the housing bore the arm adapted to be
11 extendable through an open end of the bore in the male endform into contact
12 with a surface of the male endform.

Cancel claims 17 and 18.

1 19. (Amended) The electrical contact of claim [18] 16 further
2 comprising:
3 the arm having a bent end adapted to be extendable into the male
4 endform.

1 22. (Amended) The electrical contact of claim [17] 16 wherein
2 the first portion of the contact member comprises:
3 a tubular body adapted to be mountable in the bore in the quick
4 connector housing, the arm extending from one end of the tubular body.

1 25. (Amended) The electrical contact of claim [17] 16 wherein
2 the first portion of the contact member comprises:
3 an annular ring adapted to be mountable in the bore in the quick
4 connector housing, the arm extending from the annular ring.

Cancel claim 29.